NRC NEWS

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NRC CITES LIMERICK UNIT 2 NUCLEAR PLANT FOR INSPECTION FINDING OF LOW TO MODERATE SAFETY SIGNIFICANCE

The Limerick Unit 2 nuclear power plant will receive additional oversight from the Nuclear Regulatory Commission following the finalization of a "White" (low to moderate safety significance) inspection finding for the facility, which is located in Limerick, Pa., and operated by Exelon Generation Co., LLC.

The inspection finding involves inadequate procedures related to the operation of two main feedwater system valves. During a Limerick Unit 2 start-up on April 22, 2011, the valves failed to fully close, resulting in one of the plant's safety systems, known as the Reactor Core Isolation Cooling (RCIC) system, being inoperable from April 23 to May 23, 2011. Specifically, the partially open valves created a flow path that would have prevented the majority of water flow from the RCIC system from reaching the reactor during an accident and thereby helping to mitigate the event.

Because nuclear power plants are equipped with multiple safety systems, the reactor still could have been cooled and the plant safely shut down despite the condition. However, the unavailability of the RCIC system would represent a reduction in the plant's safety margins.

In addition to the impacts on the RCIC system, the partially open valves also rendered a Primary Containment Isolation Valve inoperable during the same period. Such valves would be used during an accident to close off the plant's containment building during a significant event in order to prevent the release of radioactivity to the environment. The plant's other containment isolation valves remained available to perform their function.

Once the problem was identified by plant operators, they fully closed the valves and restored the operability of the RCIC system and the Primary Containment Isolation Valve.

"Because the valves in question failed to fully shut, the majority of the cooling water from one of the plant's safety systems would have diverted to the condenser rather than flow to the reactor," NRC Region I Administrator Bill Dean said. "While other systems would help ensure safe shutdown of the reactor during an emergency, the NRC considers any degradation of

plant safety margins to be unacceptable. It is important that Exelon takes actions to fully and satisfactorily address this problem, and the NRC will conduct necessary inspections to ensure this has taken place."

Exelon opted not to provide the NRC with a response to the finding, but the company earlier informed the agency of corrective actions it has taken, including checks of other valves that might be similarly affected, revisions to the operating procedure for the valves, and revisions to maintenance and testing procedures. The NRC's Resident Inspectors assured that the immediate actions taken by Limerick plant staff to address the issue were accomplished satisfactorily.

However, at a future date, the NRC will perform a supplemental inspection at Limerick Unit 2 to evaluate the company's root-cause analysis of the problems involving the valves and its corrective actions.

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